

Natural Gas Shortage?

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Data Sources Used in This Publication

EIA
ICE
Point Logic Energy
Japan Ministry of Trade
Korea Customs Service

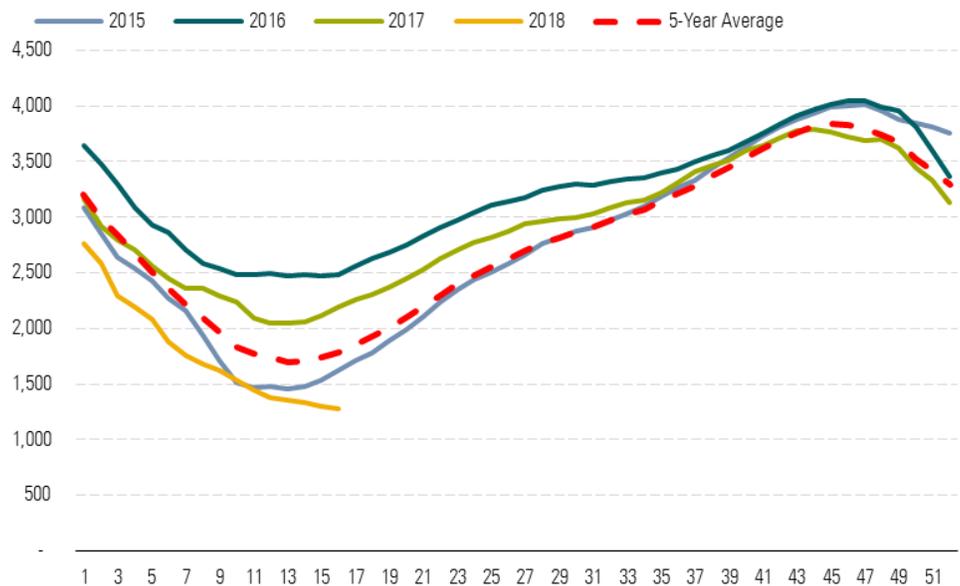
Natural Gas Shortage?

On April 26, the Energy Information Administration published an 18 billion cubic foot reduction in natural gas storage levels, putting working gas in storage at 1,281 bcf for the week ending April 20. This level is 897 bcf lower than this point last year, and 527 bcf lower than the five-year average. The only time storage levels fell below the current level was in 2014, when working gas in inventory hit 899 bcf. With storage levels at historically low levels, prices at Henry Hub have remained low. Is the market failing to price in the potential for a natural gas shortage, or have the fundamentals shifted into a new pattern?

Natural Gas Storage

Natural gas storage levels in 2018 have generally been lower than the past several years (Exhibit 1). Last week's 18 bcf draw occurred relatively late in the season, mainly driven by persistent colder temperatures across the country. At this point last year, working gas in storage saw a 74 bcf build to 2,189 bcf. Every week 16 going back to 2010 has seen inventory builds in the range of 7 bcf–89 bcf, with a five-year average build of 50 bcf. However, prices have remained low, despite the late-season storage draw.

Exhibit 1 Natural Gas Storage

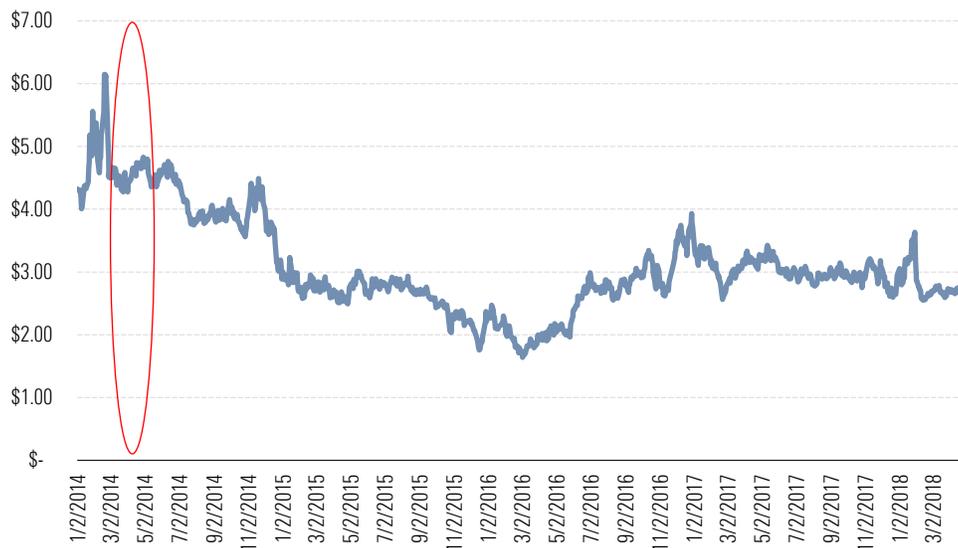


Source: EIA

Changes to production and demand are the driver of the stark difference in storage year over year. Lower 48 production has continued to show amazing growth, and April 2018 modeled dry production is expected to hit a new high at 80.8 bcf/d. This compares with 71.5 bcf/d in April 2017, which is an increase of 9.3 bcf/d. Meanwhile, aggregate demand was forecast to be 82.1 bcf/d in April 2018 compared with 69.1 bcf/d last year, which is a 13 bcf/d increase.

Taking those numbers in isolation, the market is short 4.6 bcf/d for April, which is driving below average storage levels. The higher winter prices may represent the normal seasonal differences between summer and winter and may not be fully pricing in the ability to inject enough to provide healthy storage levels to meet winter demand, providing room for prices to move up. However, prices have remained in a very narrow range over the past few years. The last time storage levels came in below 1,281 bcf in week 16 was in 2014, when working gas in storage was 899 bcf. Spot month gas prices in April 2014 traded significantly higher at between \$4.28 and \$4.83 (Exhibit 2). This compares with a range between \$2.66 and \$2.82 this April.

Exhibit 2 Spot Month Henry Hub (\$/mmbtu)



Source: EIA

Fundamental Shift

The one bright spot on the horizon for U.S. natural gas will come from the export market, and much of the additional supply appears to be geared for markets overseas. Japan saw an increase in LNG imports in 2017, but volumes are expected to decrease as the nuclear fleet ramps up over the next few years. South Korea has also seen an increase in natural gas imports, as the country continues its transition from fossil-based fuels to more sustainable sources, leveraging natural gas as the bridge fuel. China will also be a major demand center for U.S. LNG as the country builds out its natural gas infrastructure. Coupled with shortages in Europe this past year, the demand for LNG appears to be there.

The challenge for U.S. producers and exporters will rest on the nation's ability to ramp up projects in tandem with export demand growth, and the ability for those domestic projects to be competitive with the slew of projects expected across the globe. Delays at Sempra's Cameron LNG export terminal, which was expected this year but delayed to 2019, add to the concerns related to the pace of U.S. export projects. Only time will tell if the current slate of U.S. projects will be available to meet demand, or if the nation will be late to the party, exacerbating what may be an already oversupplied domestic market.

Prices are trading in a much lower range than this point last year, and what would normally be bullish storage numbers have lacked staying power, signaling a structural shift in the market. Although higher this year than last, demand is not expected to grow in a significant way, as new gas generation slows and electricity demand decreases. In the absence of a significant change in demand, which could come from the export market, the normal demand levels are insufficient for keeping pace with current production. The market not only appears comfortable with current storage levels, but also appears to be sending signals that the market will remain oversupplied for some time. ■■■

Natural Gas Important Points

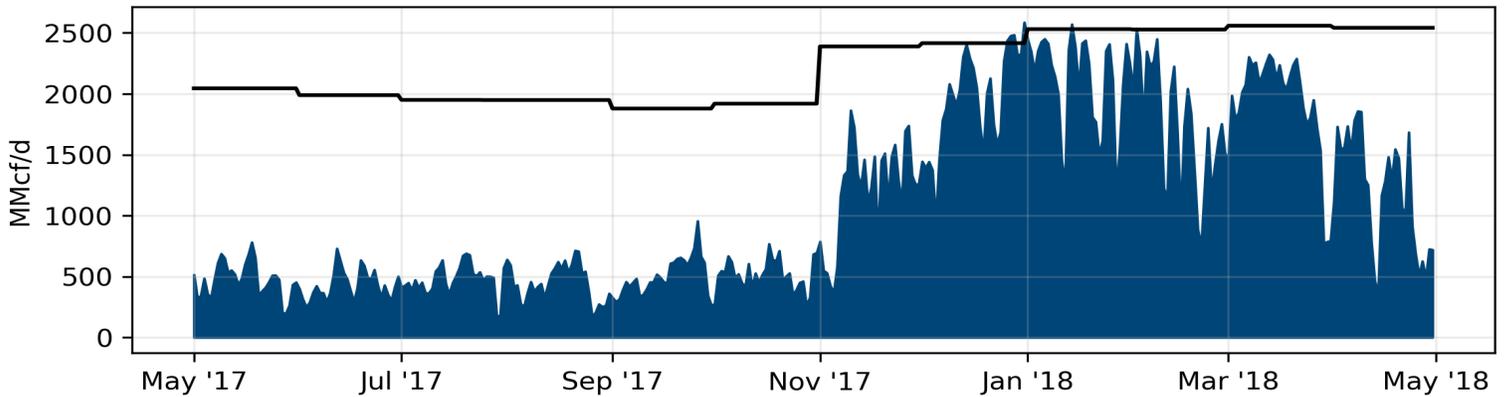
Algonquin: Stony point Compressor



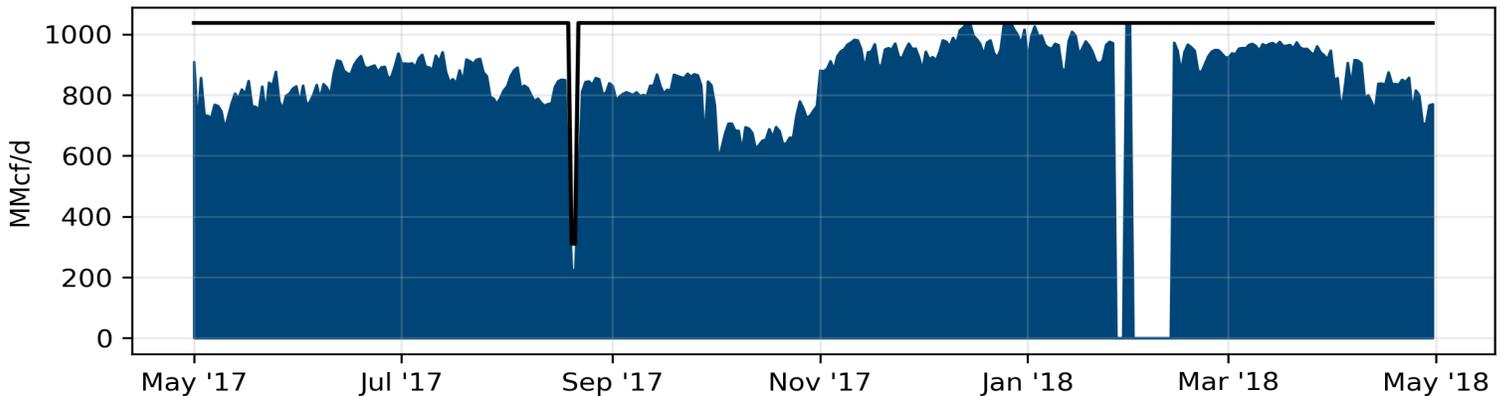
Transcontinental: Leidy Line Station 505



Texas Eastern: Lambertville Compressor

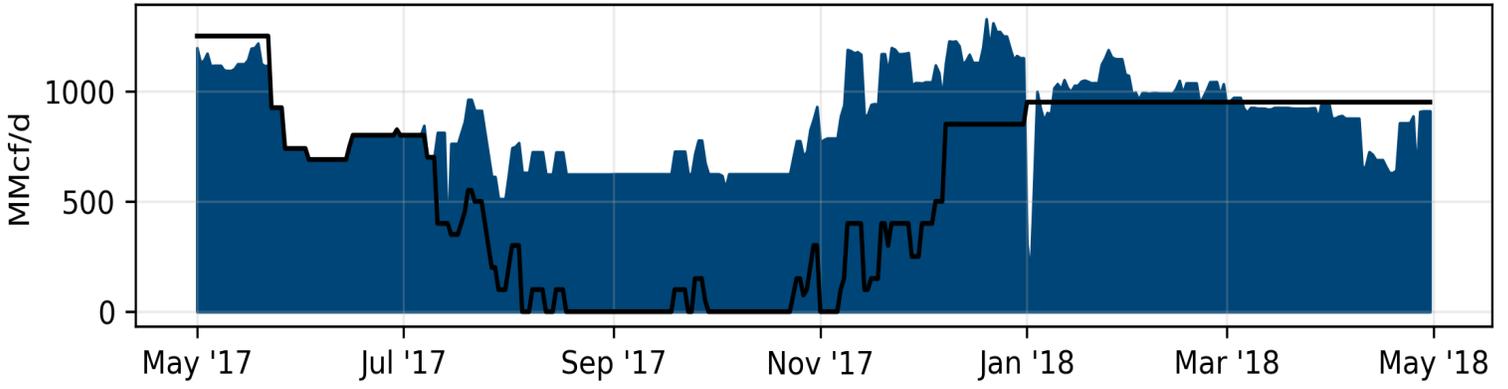


Millennium: Wagner West Compressor

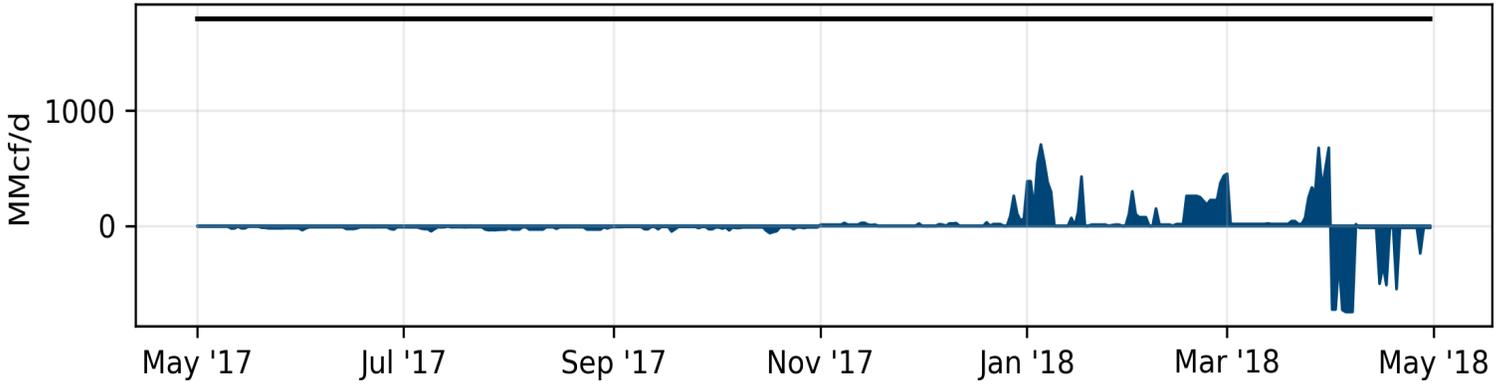


■ Volume — Capacity

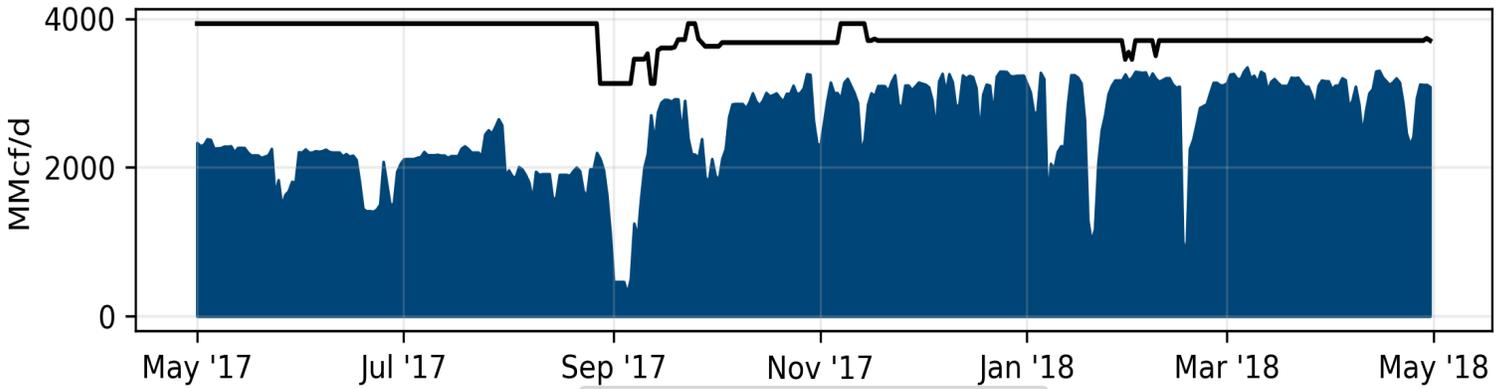
Columbia Gas Trans: Braxton-Stonewall



LNG: Cove Point



LNG: Sabine



■ Volume — Capacity

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